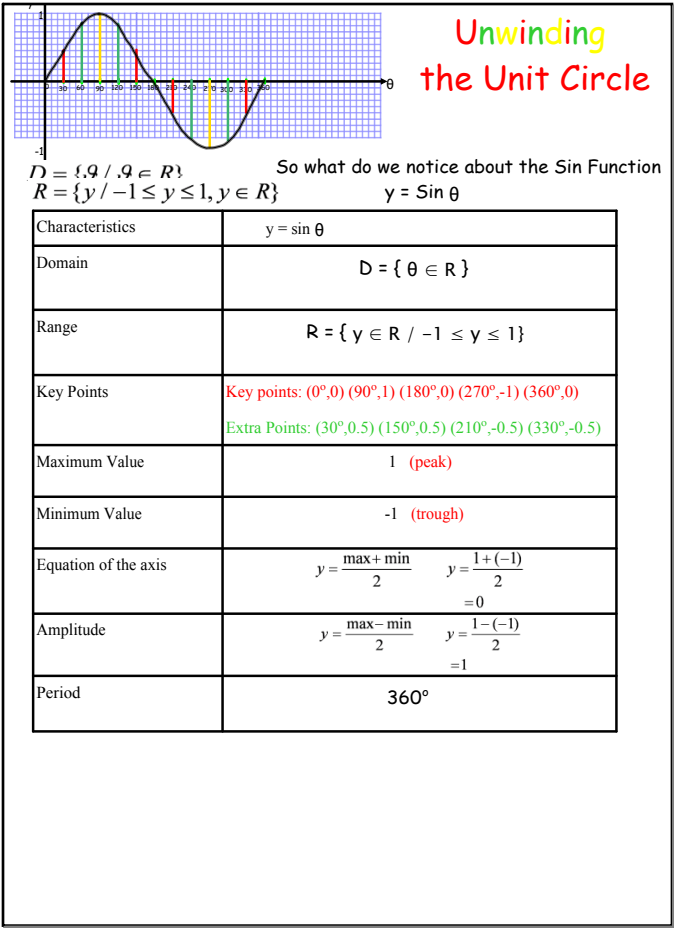


Apr 12-11:13 AM



Nov 5-10:40 AM

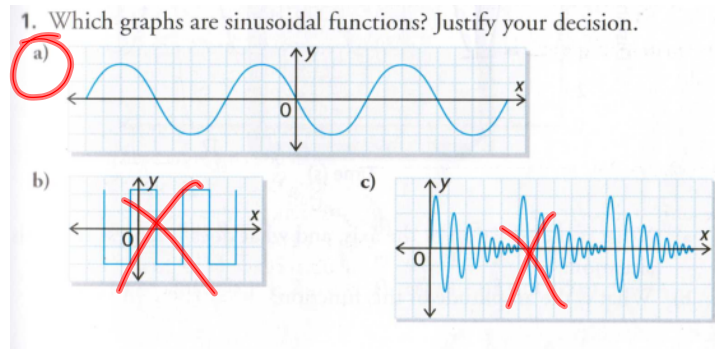
Define Sinusoidal Function:



A type of periodic function created by transformations of $f(x) = \sin x$

Ex 1: Let's try p 339 #1:

Which graphs are sinusoidal?

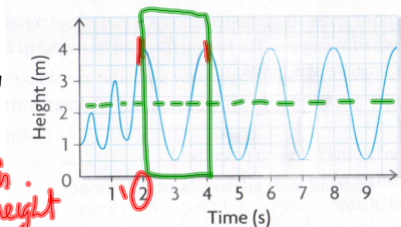


Nov 5-3:11 PM

Ex 2: Nolan is jumping on a trampoline. The graph shows how high his feet are above the ground.

- a) How long does it take Nolan's jumping to become sinusoidal? 2 sec
What is happening during these first few seconds?

Building up to his max/min height
for the following questions refer to the sinusoidal portion of the curve



- b) What is the period of the curve? 2 sec
What does the period mean in this context? time it takes to complete one full jump
- c) What is the highest Nolan is off ground while on the trampoline? 4m
This is the peak of the curve.
- d) What is the closest Nolan comes to the ground while on the trampoline? 0.5m
This is the trough of the curve.
- e) Write an equation for the axis of the periodic portion of the curve.
What does it represent in this situation? $y = \frac{\text{max} + \text{min}}{2}$
- f) What is the amplitude of the curve?
What does the amplitude mean in this context?

$$= \frac{\text{max} - \text{min}}{2}$$

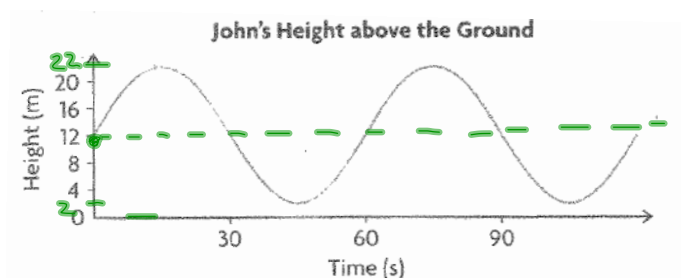
$$= \frac{4 - 0.5}{2}$$

$$= 1.75$$

The distance from the middle of his jump to the highest & lowest point.

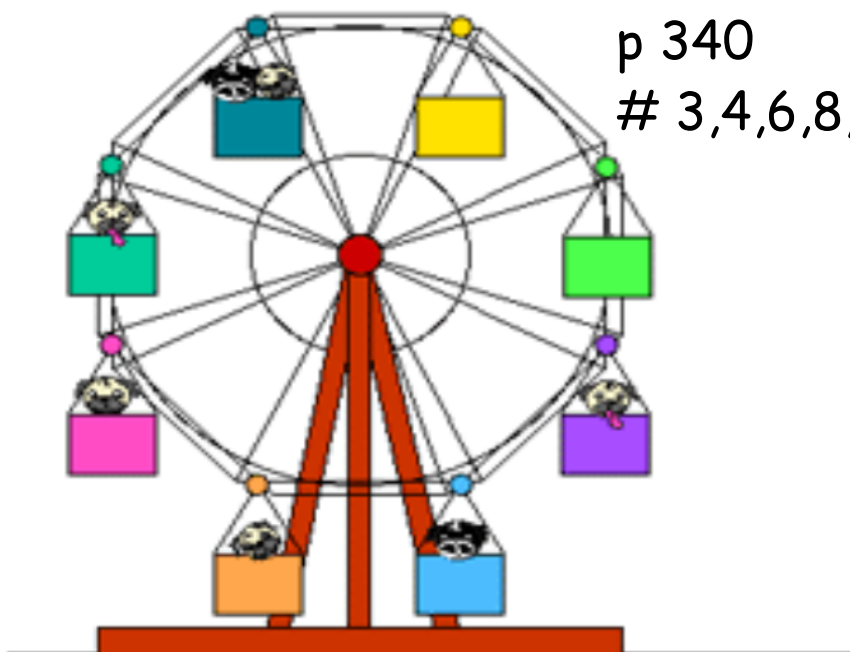
Apr 24-8:31 AM

Ex 3 The graph shows John's height above the ground as a function of time as he rides a Ferris wheel



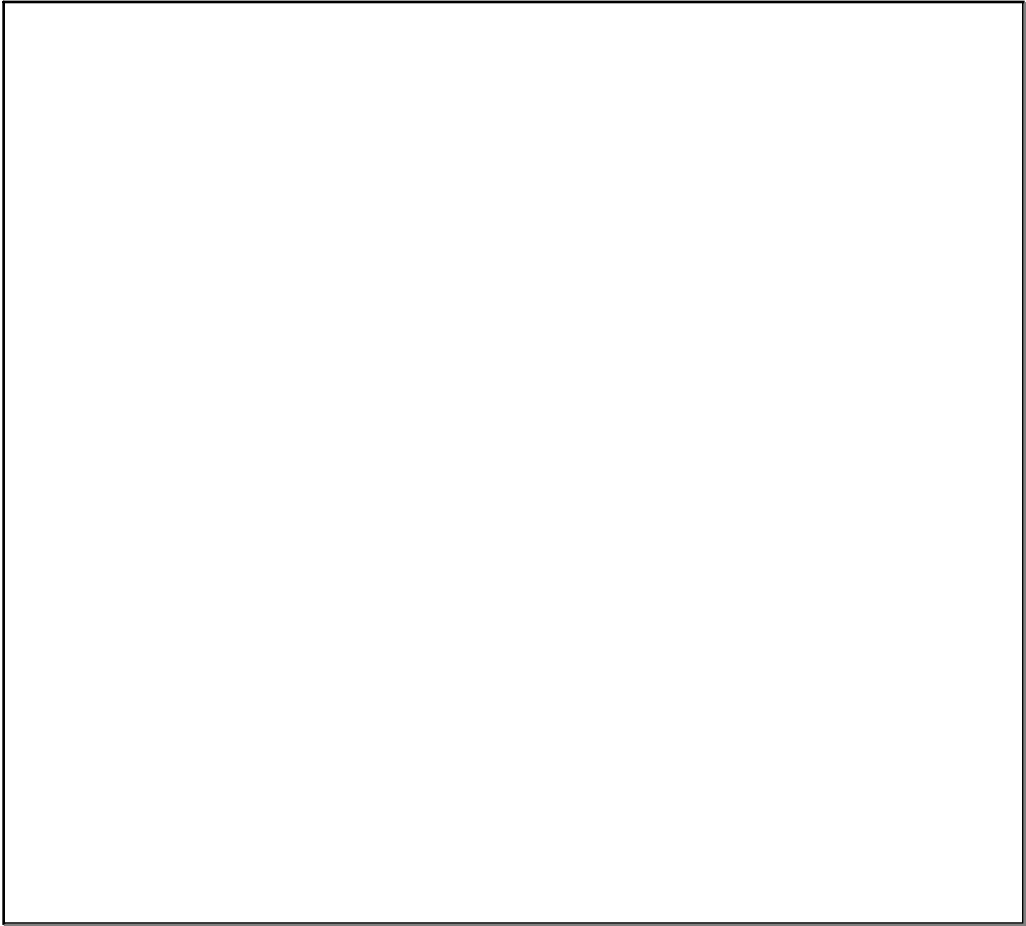
- What is the Diameter of the Ferris wheel? 20m
- The radius of the wheel is the Amplitude of the curve. 10m
- How high above the ground is the axle of the wheel? Axis of the equation. 12m
- What is John's initial height above the ground? Explain.
12m
- What is the closest John comes to the ground while on the ride?
2m (lowest point)

Apr 15-11:37 AM



Hmwk
p 340
3,4,6,8,10

Nov 6-9:04 AM



Nov 10-11:39 AM

unwind unit and transformwaves.GSP